



Subtitling and Closed Captioning

Subtitling has been used in TV broadcasts since the 1930's. It is typically employed in one of two different forms:

Open Subtitles - which are sometimes referred to as 'burnt-in' or 'in-vision' subtitles and are generally encoded as a permanent part of the video image.

Closed Captions – this is a generic term for subtitles that are viewer-selectable and is typically used for subtitles that are decoded and displayed as text by the TV receiver e.g. Teletext subtitles in Europe, Line 21 closed captioning system in the USA, or DVB closed captions.

The use of the terms subtitling and captioning varies in different parts of the world. 'Subtitling' is often used to describe the technique of using open captions for language translation of foreign programmes, whilst the term 'Captioning' is typically used for same language transcription for closed captions provided for the hearing impaired - consequently closed captions include descriptions for relevant noises and background sounds.

Starfish engineers have a long history in subtitling technology, and when Starfish was formed in 2000 subtitling became one of its core competencies. A range of products were developed which have evolved through collaboration with customers, and today Starfish offers a complete product range that can be used to build an end-to-end solution for any subtitling requirement



Some of our products that deserve particular highlighting include:

Subtitle File QC

The Isis Subtitle FileQC Service automatically processes standard file formats including: EBU .stl, pac files, .cap (line 21) or .srt open subtitle files. It has a number of options available that include auto correction of common file problems.

The product runs as a Windows service and will automatically process any subtitle or caption file that appears in the 'source' folder. Files are then moved to either a Pass or Fail folder and a failure report created in a Text, HTML or XML format. Multiple folder sets can be configured to process different files types or different file sources.

Preview Generation

This software application processes closed caption World System Teletext or open subtitle files, and creates burnt-in subtitles onto Windows Media encoded video files. The Isis Subtitle Preview Compiler enables preview copies of subtitled broadcast files to be processed quickly and easily and avoids the need for any external video processing hardware. The resulting preview copy can be electronically transferred, or burnt to a DVD, for client approval of subtitling projects, or used for web streaming applications.

Subtitle Routing

The TransCast subtitle data exchange system routes RS232 or IP inputs to outputs in a subtitle routing application. It features flexible configuration of an unrestricted number of inputs and outputs and also supports real-time monitoring and capturing of subtitles.

The software can also control an external router (Audio / Video) to simplify use in a complete routing system

File Based Solutions

The Starfish Compositor technology was developed for file based closed caption embedding and supports a range of encoded media formats. Compositor can also encode Parental Rating of 525 material (V-chip).

DeCompositor is a software application that processes an encoded media file to extract closed captions and recreate an industry standard .stl, .scc, or .cap captioning file. It also produces the text information from the closed captions that can be imported into a media management system to aid media indexing and searching.

Transport Stream Processing

Compositor TS was developed specifically to allow the features of Compositor subtitle embedding to operate with Transport Stream encoded media. Applications include adding closed captions to media files used for VOD.

TransCast DVB software supports DVB subtitle transmission as Bit Map images or raw text data (e.g. ASCII string). To simplify system design it can read timecode from a number of sources including a dedicated timecode reader card, via a network connection or extracting VITC from a SDI video input. The system provides either UDP or ASI outputs.

TransCast DVB Live is a real-time system that extracts Teletext subtitles from the input video source and provides a DVB subtitle stream output via UDP or ASI.

Live VBI decoding and burn-in

The EnVision Live system decodes VBI closed caption information present on the video input signal, and converts this, in real-time, to burnt-in subtitles on the video output.

The system is particularly useful for low cost regionalisation of TV channels.

